

Teachers' Professional Development and Mathematics Education in Brazil

Victor Giraldo

The Aims of the ICME-13 National Presentation

Brazil's National Presentation focused on research in mathematics education in the country and its relationships with projects and initiatives for the improvement of teacher education (especially those involving different communities: mathematicians, mathematics educators, and mathematics teachers), taking into account the challenges imposed by the Brazilian education scenario. The 90-minute presentation was accompanied by printed and interactive multimedia material exhibitions. This presentation was a joint initiative of the Brazilian Society of Mathematics Education (SBEM), the Brazilian Mathematical Society (SBM), the Brazilian Society of Applied and Computational Mathematics (SBMAC), and the Brazilian Statistics Association (ABE).

The Content of the Presentation

In Brazil, in recent decades, efforts have been made aiming at improving the conditions of school education, and teachers' pre-service and in-service professional development. Such efforts involve policies from federal, state, and local governments, as well as initiatives conducted by public institutions and scientific societies.

V. Giraldo (✉)

Federal University of Rio de Janeiro, Rio de Janeiro, Brazil
e-mail: victor.giraldo@ufrj.br

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The Structure of the Presentation

We opened the talk with a very brief account of the Brazilian education context. The main focus, however, was on the projects led by the scientific societies that proposed this presentation: The purpose of this presentation was an overview of mathematics education in Argentina and the historic contributions that have converged to reach its present state. The presentation included three principal topics: the characteristics of the education system as it currently exists and some special programs; the teacher education system and its particularities; and the development of mathematics and mathematics education in the country, their historical context, and the current state of mathematics education as a research field.

The Structure of the Presentation (in Detail)

Towards education for all: A brief historical perspective of the Brazilian education system: Public policies, including public elementary and secondary education, inclusive education, multicultural education, and textbook assessment and distribution.

Integrating classroom practice into teacher education (20 min): Mathematics teachers' pre-service and in-service professional development in Brazil, including workshops and other activities and policies especially designed to bring teachers education closer to classroom practice.

Integrating research into teachers' practices: An overview of research and graduate programs in mathematics education, professional graduate programs for teachers, research journals, professional journals, conferences for teachers, and their impact on mathematics teachers' professional development in Brazil.

The Klein Project in Brazil and its outcomes: Workshops for teachers, books, and multimedia instructional materials.

Collaboration between mathematicians and mathematics educators: Development of textbooks and other instructional materials for school mathematics and for pre-service and in-service mathematics teacher education.

An international integration project: The Mathematical Space in Portuguese Language (EMeLP), an international organization of the Portuguese-speaking countries affiliated with ICMI: foundation, initiatives, and meetings.

Closing: Future perspectives and challenges to overcome.

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